

SAFETY DATA SHEETRevision Date: 09/07/2018Print Date: 6/20/2021SDS Number: R0091437Valvoline™ SAE 80W-90 High Performance Gear OilVV831

29 CFR 1910.1200 (OSHA HazCom 2012) SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name

: Valvoline[™] SAE 80W-90 High Performance Gear Oil

| Details of the supplier of the safety data sheet | Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) |
|--------------------------------------------------|-----------------------------------------------------------------|
| Valvoline LLC | |
| 100 Valvoline Way Lexington, KY 40509 | Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) |
| United States of America (USA) | 1-800-1EAWIVAL (1-800-832-8825) |
| 1-800-TEAMVAL (1-800-832-6825) | Product Information |
| | 1-800-TEAMVAL (1-800-832-6825) |
| | |
| SDS@valvoline.com | |
| | |

SECTION 2. HAZARDS IDENTIFICATION

| GHS Classification Skin sensitization | : Category 1 |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GHS label elements | |
| Hazard pictograms | |
| Signal Word | : Warning |
| Hazard Statements | : May cause an allergic skin reaction. |
| Precautionary Statements | Prevention: Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves. Response: IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Wash contaminated clothing before reuse. Disposal: |



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Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

| nazaruous components | | | |
|--------------------------------|------------|-----------------------|-------------------|
| Chemical name | CAS-No. | Classification | Concentration (%) |
| DISTILLATES (PETROLEUM), | 64742-54-7 | Not a hazardous | >=60.00 - < 70.00 |
| HYDROTREATED HEAVY | | substance or mixture. | |
| PARAFFINIC | | | |
| OLEFINSULFIDE | 68937-96-2 | Skin Sens. 1B; H317 | >=1.50 - < 5.00 |
| | | | |
| | | | |
| React. prod. of bis(2- | | Flam. Liq. 4; H227 | >=0.50 - < 1.00 |
| methylpentan-2- | | | |
| yl)dithiophosphoricacid + | | Acute Tox. 4; H302 | |
| phosphorus oxide, propylene | | | |
| oxide and amines, C12-14-alkyl | | Eye Dam. 1; H318 | |
| (branched) | | | |
| | | Skin Sens. 1; H317 | |
| | | | |
| | | | |

SECTION 4. FIRST AID MEASURES

| General advice | : Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended. |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| If inhaled | If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician. |
| In case of skin contact | Remove contaminated clothing. If irritation develops, get medical attention. If on skin, rinse well with water. First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water. Wash contaminated clothing before re-use. |
| In case of eye contact | : Flush eyes with water as a precaution. |



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| | | | |

| | Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist. |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| If swallowed : | Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. |
| Most important symptoms : and effects, both acute and delayed | No symptoms known or expected. May cause an allergic skin reaction. |
| Notes to physician : | No hazards which require special first aid measures. |

SECTION 5. FIREFIGHTING MEASURES

| Suitable extinguishing media | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam Carbon dioxide (CO2) Dry chemical |
|-----------------------------------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Unsuitable extinguishing media | : | High volume water jet |
| Specific hazards during firefighting | : | Do not allow run-off from fire fighting to enter drains or water courses. |
| Hazardous combustion products | : | carbon dioxide and carbon monoxide Hydrocarbons Sulphur oxides |
| Specific extinguishing methods | : | |
| | | Product is compatible with standard fire-fighting agents. |
| Further information | : | Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

| Personal precautions, | : | Use personal protective equipment. |
|--------------------------|---|-------------------------------------------------------------|
| protective equipment and | | Persons not wearing protective equipment should be excluded |





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| emergency procedures | | from area of spill until clean-up has been completed. |
|-------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental precautions | : | Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods and materials for containment and cleaning up | : | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. |
| Other information | : | Comply with all applicable federal, state, and local regulations. |

SECTION 7. HANDLING AND STORAGE

| Advice on safe handling | Do not breathe vapours/dust. Do not smoke. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Container hazardous when empty. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations. |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conditions for safe storage | Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. |

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

| Components | CAS-No. | Value type | Control | Basis |
|------------------------|----------------|------------|---------------|----------|
| | | (Form of | parameters / | |
| | | exposure) | Permissible | |
| | | | concentration | |
| DISTILLATES (PETROLEUM | И), 64742-54-7 | TWA | 5 mg/m3 | OSHA Z-1 |
| HYDROTREATED HEAVY | | | Mist | |
| PARAFFINIC | | | | |
| | | TWA | 5 mg/m3 | ACGIH |



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| | | | | Inhalable fraction | |
|-------------------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------------|---------------|
| | | | TWA | 5 mg/m3 Mist | OSHA P0 |
| | | | TWA | 5 mg/m3 Mist | NIOSH REL |
| | | | ST | 10 mg/m3 Mist | NIOSH REL |
| | | | PEL | 5 mg/m3 particulate | CAL PEL |
| Engineering measures | : | ventilation to | naintain exposu below levels tha | (general and/or local ire below exposure gu at cause known, susp | uidelines (if |
| Personal protective equipm Respiratory protection | ent : | Respiratory p of use. | rotection is not r | equired under norma | l conditions |
| Hand protection Remarks | : | | for a specific w ucers of the prot | orkplace should be d ective gloves. | iscussed |
| Eye protection | : | Not required under normal conditions of use. Wear splash- proof safety goggles if material could be misted or splashed into eyes. | | | |
| Skin and body protection | : | Wear as appropriate: Impervious clothing Safety shoes Choose body protection according to the amount and concentration of the dangerous substance at the work place. Discard gloves that show tears, pinholes, or signs of wear. Wear resistant gloves (consult your safety equipment supplier). | | | |
| Hygiene measures | : | Wash hands | before breaks a | nd at the end of work | day. |
| | | | TIES | | |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| Physical state | : | liquid |
|-----------------|---|-------------------|
| Colour | : | amber |
| Odour | : | No data available |
| Odour Threshold | : | No data available |
| рН | : | No data available |



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| Melting point/freezing point | : No data available |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Boiling point/boiling range | : > 424.9 °F / 218.3 °C (1013.333 hPa) |
| Flash point | : 394 - 480 °F / 201 - 249 °C Method: Cleveland open cup |
| Evaporation rate | : > 1 Ethyl Ether |
| Flammability (solid, gas) | : No data available |
| Upper explosion limit | : No data available |
| Lower explosion limit | : No data available |
| Vapour pressure | : < 0.1000000 mmHg |
| Relative vapour density | : >1AIR=1 |
| Relative density | : 0.89 (60.00 °F) |
| | |
| Density | : 0.8916 g/cm3 (15.56 °C) |
| Density Solubility(ies) Water solubility | : 0.8916 g/cm3 (15.56 °C) : No data available |
| Solubility(ies) | : No data available |
| Solubility(ies) Water solubility | : No data available |
| Solubility(ies) Water solubility Solubility in other solvents Partition coefficient: n- | No data availableNo data available |
| Solubility(ies) Water solubility Solubility in other solvents Partition coefficient: n- octanol/water | No data available No data available No data available |
| Solubility(ies) Water solubility Solubility in other solvents Partition coefficient: n- octanol/water Thermal decomposition Viscosity | No data available No data available No data available No data available |

SECTION 10. STABILITY AND REACTIVITY

| Reactivity | : No decomposition if stored and applied as directed. |
|--------------------|-------------------------------------------------------|
| Chemical stability | : Stable under recommended storage conditions. |



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| Possibility of hazardous reactions | : Product will not undergo hazardous polymerization. |
|------------------------------------|------------------------------------------------------|
| Conditions to avoid | : None known. |
| Incompatible materials | : Strong oxidizing agents |
| Hazardous decomposition products | carbon dioxide and carbon monoxide Sodium oxides |

SECTION 11. TOXICOLOGICAL INFORMATION

| Information on likely routes of Inhalation Skin contact Eye Contact Ingestion Acute toxicity Not classified based on availab Product: | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Acute dermal toxicity | : | Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method |
| <u>Components:</u> | | |
| | | IYDROTREATED HEAVY PARAFFINIC: |
| Acute oral toxicity | : | LD50 (Rat): > 15 g/kg |
| Acute dermal toxicity | : | LD50 (Rabbit): > 5 g/kg |
| OLEFINSULFIDE: | | |
| Acute oral toxicity | : | LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 401 Assessment: Not classified as acutely toxic by ingestion under GHS. Remarks: No mortality observed at this dose. |
| Acute dermal toxicity | : | LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: Not classified as acutely toxic by dermal absorption under GHS. Remarks: No mortality observed at this dose. |
| React. prod. of bis(2-methylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched): | | |
| Acute oral toxicity | : | |
| | | Method: OECD Test Guideline 401 |
| | | Assessment: The component/mixture is classified as acute |



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oral toxicity, category 4.

| Skin corrosion/irritation | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | |
| Not classified based on avail | able information |
| | |
| Product: | Man and a lin initation is an and the same |
| Remarks | : May cause skin irritation in susceptible persons. |
| | |
| <u>Components:</u> | |
| DISTILLATES (PETROLEU | M), HYDROTREATED HEAVY PARAFFINIC: |
| Assessment | : Slight, transient irritation |
| Result | : Slight, transient irritation |
| | |
| OLEFINSULFIDE: | |
| Result | : Mild skin irritation |
| Result | |
| 0 | |
| Serious eye damage/eye ir | |
| Not classified based on avail | able information. |
| Product: | |
| Remarks | : Vapours may cause irritation to the eyes, respiratory system |
| | and the skin. |
| | |
| Remarks | : Unlikely to cause eye irritation or injury. |
| Remarks | |
| Components: | |
| | |
| | M), HYDROTREATED HEAVY PARAFFINIC: |
| Result | : No eye irritation |
| Assessment | : No eye irritation |
| | |
| | |
| OLEFINSULFIDE: | |
| OLEFINSULFIDE: Result | : Slight, transient irritation |
| | : Slight, transient irritation |
| Result | : Slight, transient irritation /Ipentan-2-yl)dithiophosphoricacid + phosphorus oxide, |
| Result React. prod. of bis(2-methy | - |
| Result React. prod. of bis(2-methy | /Ipentan-2-yl)dithiophosphoricacid + phosphorus oxide, |
| Result React. prod. of bis(2-methy propylene oxide and amine | ylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched): |
| Result React. prod. of bis(2-methy propylene oxide and amine Result | ylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched): : Corrosive |
| Result React. prod. of bis(2-methy propylene oxide and amine Result Respiratory or skin sensiti | ylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched): : Corrosive |
| Result React. prod. of bis(2-methy propylene oxide and amine Result Respiratory or skin sensiti Skin sensitisation | ylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched): : Corrosive sation |
| Result React. prod. of bis(2-methy propylene oxide and amine Result Respiratory or skin sensiti Skin sensitisation May cause an allergic skin re | ylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched): : Corrosive sation |
| Result React. prod. of bis(2-methy propylene oxide and amine Result Respiratory or skin sensiti Skin sensitisation May cause an allergic skin re Respiratory sensitisation | ylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched): : Corrosive sation eaction. |
| Result React. prod. of bis(2-methy propylene oxide and amine Result Respiratory or skin sensiti Skin sensitisation May cause an allergic skin re | ylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched): : Corrosive sation eaction. |
| Result React. prod. of bis(2-methy propylene oxide and amine Result Respiratory or skin sensiti Skin sensitisation May cause an allergic skin re Respiratory sensitisation | ylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched): : Corrosive sation eaction. |
| Result React. prod. of bis(2-methy propylene oxide and amine Result Respiratory or skin sensiti Skin sensitisation May cause an allergic skin re Respiratory sensitisation Not classified based on avail | ylpentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched): : Corrosive sation eaction. |
| Result React. prod. of bis(2-methy propylene oxide and amine Result Respiratory or skin sensiti Skin sensitisation May cause an allergic skin re Respiratory sensitisation Not classified based on avail <u>Product:</u> | <pre>/lpentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched):</pre> |
| Result React. prod. of bis(2-methy propylene oxide and amine Result Respiratory or skin sensiti Skin sensitisation May cause an allergic skin re Respiratory sensitisation Not classified based on avail <u>Product:</u> Remarks | <pre>/lpentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched):</pre> |
| Result React. prod. of bis(2-methy propylene oxide and amine Result Respiratory or skin sensiti Skin sensitisation May cause an allergic skin re Respiratory sensitisation Not classified based on avail <u>Product:</u> Remarks <u>Components:</u> | <pre>/lpentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched):</pre> |
| Result React. prod. of bis(2-methy propylene oxide and amine Result Respiratory or skin sensiti Skin sensitisation May cause an allergic skin re Respiratory sensitisation Not classified based on avail Product: Remarks Components: OLEFINSULFIDE: | <pre>//pentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched): : Corrosive sation eaction. lable information. : May cause allergic skin reaction.</pre> |
| Result React. prod. of bis(2-methy propylene oxide and amine Result Respiratory or skin sensiti Skin sensitisation May cause an allergic skin re Respiratory sensitisation Not classified based on avail Product: Remarks Components: OLEFINSULFIDE: Test Type | <pre>//pentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched): : Corrosive sation eaction. lable information. : May cause allergic skin reaction.</pre> |
| ResultReact. prod. of bis(2-methy propylene oxide and amine ResultRespiratory or skin sensiti Skin sensitisation May cause an allergic skin re Respiratory sensitisation Not classified based on avail Product: RemarksComponents: OLEFINSULFIDE: Test Type Species | <pre>//pentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched): : Corrosive sation eaction. lable information. : May cause allergic skin reaction.</pre> |
| Result React. prod. of bis(2-methy propylene oxide and amine Result Respiratory or skin sensiti Skin sensitisation May cause an allergic skin reference Respiratory sensitisation Not classified based on avail Product: Remarks Components: OLEFINSULFIDE: Test Type Species Assessment | <pre>//pentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched): : Corrosive sation eaction. lable information. : May cause allergic skin reaction.</pre> |
| ResultReact. prod. of bis(2-methy propylene oxide and amine ResultRespiratory or skin sensiti Skin sensitisation May cause an allergic skin re Respiratory sensitisation Not classified based on avail Product: RemarksComponents: OLEFINSULFIDE: Test Type Species | <pre>//pentan-2-yl)dithiophosphoricacid + phosphorus oxide, es, C12-14-alkyl (branched): : Corrosive sation eaction. lable information. : May cause allergic skin reaction.</pre> |



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| | | tan-2-yl)dithiophosphoricacid + phosphorus oxide, 12-14-alkyl (branched): Local lymph node assay Mouse OECD Test Guideline 429 May cause sensitisation by skin contact. | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Components | based on available | information. | |
| OLEFINSULF Genotoxicity ir | | Test Type: in vitro assay Result: Positive results were obtained in some in vitro tests. | |
| Genotoxicity ir | n vivo : | Test Type: Micronucleus test Species: Mouse Cell type: Bone marrow Method: OECD Test Guideline 474 Result: negative | |
| Not classified Components DISTILLATES | Carcinogenicity Not classified based on available information. <u>Components:</u> DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC: Carcinogenicity - : Classified based on DMSO extract content < 3% (Regulation Assessment (EC) 1272/2008, Annex VI, Part 3, Note L) | | |
| IARC | | this product present at levels greater than or equal to 0.1% is able, possible or confirmed human carcinogen by IARC. | |
| OSHA | | this product present at levels greater than or equal to 0.1% is regulated carcinogens. | |
| NTP | NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. | | |
| Reproductive toxicity Not classified based on available information. STOT - single exposure Not classified based on available information. STOT - repeated exposure Not classified based on available information. Aspiration toxicity Not classified based on available information. | | | |
| Product: No aspiration | toxicity classificatior | 1 | |
| Componente | | | |

<u>Components:</u> DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC: No aspiration toxicity classification



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Further information <u>Product:</u>

Remarks

: No data available

SECTION 12. ECOLOGICAL INFORMATION

| Ecotoxicity <u>Product:</u> Ecotoxicology Assessment Short-term (acute) aquatic | | Acute aquatic toxicity Category 3; Harmful to aquatic life. |
|-------------------------------------------------------------------------------------------------|---|-----------------------------------------------------------------------------------------|
| hazard | • | Acute aqualle loxicity Category 5, Hammar to aqualle life. |
| Long-term (chronic) aquatic hazard | : | Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects. |
| <u>Components:</u> DISTILLATES (PETROLEUM), Toxicity to fish | | YDROTREATED HEAVY PARAFFINIC: LL50 (Fish): > 100 mg/l Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EL50 (Aquatic invertebrates): > 10,000 mg/l Exposure time: 48 h |
| Toxicity to algae | : | EL50 (Algae, algal mat (Algae)): > 100 mg/l Exposure time: 72 h |
| Toxicity to fish (Chronic toxicity) | : | NOEC (Fish): 10 mg/l |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Aquatic invertebrates): 10 mg/l |
| Ecotoxicology Assessment Short-term (acute) aquatic hazard | : | Not classified based on available information. |
| Long-term (chronic) aquatic hazard | : | Not classified based on available information. |
| OLEFINSULFIDE: Ecotoxicology Assessment Short-term (acute) aquatic hazard | : | Harmful to aquatic life. |
| Long-term (chronic) aquatic hazard | : | Harmful to aquatic life with long lasting effects. |



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| Toxicity to fish: LL50 (Oncorhynchus mykiss (rainbow trout)): ca. 24 mg/l Exposure time: 96 h Test Type: static test Test substance: WAF Method: OECD Test Guideline 203 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| |
| |
| Toxicity to daphnia and other aquatic invertebrates: EL50 (Daphnia magna (Water flea)): ca. 91.4 mg/l Exposure time: 48 h Test Type: static test Test substance: WAF Method: OECD Test Guideline 202 |
| Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 15 mg/l End point: Growth inhibition Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 201 |
| NOEC (Pseudokirchneriella subcapitata (green algae)): 3.3 mg/l End point: Growth inhibition Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 201 |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Daphnia magna (Water flea)): 0.12 mg/l Exposure time: 21 d End point: Reproduction Test Test Type: semi-static test Test substance: WAF Method: OECD Test Guideline 211 |
| Ecotoxicology Assessment Short-term (acute) aquatic : Toxic to aquatic life. hazard |
| Long-term (chronic) aquatic : Toxic to aquatic life with long lasting effects. hazard |
| Persistence and degradability <u>Components:</u> OLEFINSULFIDE: |
| Biodegradability : Result: Not readily biodegradable. Biodegradation: 13 % Exposure time: 28 d Method: OECD Test Guideline 301B |



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| React. prod. of bis(2-methylpoxide and amines, C12-14-a Biodegradability | bentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene lkyl (branched): Result: Not readily biodegradable. Biodegradation: 7.4 % Exposure time: 28 d Method: Modified Sturm Test |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | M), HYDROTREATED HEAVY PARAFFINIC: : log Pow: Expected > 7 |
| oxide and amines, C12-14-a | pentan-2-yl)dithiophosphoricacid + phosphorus oxide, propylene lkyl (branched): : Remarks: No data available |
| No data available Mobility in soil <u>Components:</u> No data available Other adverse effects No data available <u>Product:</u> Additional ecological information <u>Components:</u> | : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life with long lasting effects. |
| SECTION 13. DISPOSAL CONS | IDERATIONS |
| Disposal methods | |
| General advice | The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. |
| | Dispose of in accordance with all applicable local, state and federal regulations. |
| Contaminated packaging | Empty remaining contents. Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. |



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SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

| ID NUMBER | PROPER SHIPPING NAME | *HAZARD CLASS | SUBSIDIARY HAZARDS | PACKING GROUP | MARINE POLLUTANT / LTD. QTY. |
|-----------|----------------------|------------------|-----------------------|------------------|------------------------------------|
|-----------|----------------------|------------------|-----------------------|------------------|------------------------------------|

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID



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| Marine pollutant | no |
|--------------------|----|
| Marine polititarit | 10 |
| | |
| | |

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Respiratory or skin sensitisation

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for carcinogenicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" for reproductive/developmental toxicity as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

The components of this product are reported in the following inventories:

| DSL | : | All components of this product are on the Canadian DSL |
|-------|---|--------------------------------------------------------|
| AICS | : | On the inventory, or in compliance with the inventory |
| ENCS | : | On the inventory, or in compliance with the inventory |
| KECI | : | On the inventory, or in compliance with the inventory |
| PICCS | : | On the inventory, or in compliance with the inventory |
| IECSC | : | On the inventory, or in compliance with the inventory |
| TSCA | : | On TSCA Inventory |

TSCA list

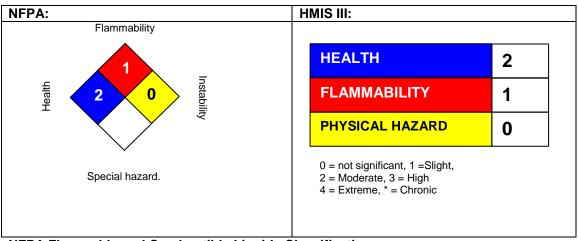
No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

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Further information

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NFPA Flammable and Combustible Liquids Classification Combustible Liquid Class IIIB

Full text of H-Statements

| H227 | Combustible liquid. |
|------|--------------------------------------|
| H302 | Harmful if swallowed. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |

Sources of key data used to compile the Safety Data Sheet Valvoline internal data including own and sponsored test reports The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society). CMR : Carcinogenic, Mutagenic or Toxic for Reproduction



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FG : Food grade GHS : Globally Harmonized System of Classification and Labeling of Chemicals. H-statement : Hazard Statement IATA : International Air Transport Association. IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization ICAO-TI (ICAO): Technical Instructions by the "International Civil Aviation Organization" IMDG : International Maritime Code for Dangerous Goods ISO : International Organization for Standardization logPow : octanol-water partition coefficient LCxx : Lethal Concentration, for xx percent of test population LDxx : Lethal Dose, for xx percent of test population. ICxx : Inhibitory Concentration for xx of a substance Ecxx : Effective Concentration of xx N.O.S.: Not Otherwise Specified OECD : Organization for Economic Co-operation and Development **OEL** : Occupational Exposure Limit P-Statement : Precautionary Statement PBT : Persistent, Bioaccumulative and Toxic **PPE : Personal Protective Equipment** STEL : Short-term exposure limit STOT : Specific Target Organ Toxicity TLV : Threshold Limit Value TWA : Time-weighted average vPvB : Very Persistent and Very Bioaccumulative WEL : Workplace Exposure Level CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act DOT : Department of Transportation FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act HMIRC : Hazardous Materials Information Review Commission HMIS : Hazardous Materials Identification System NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System